A perioperative protocol to decrease the incidence of postoperative nausea and vomiting (PONV) and promote same day discharge following laparoscopic appendectomy.

Mumin Hakim MBBS, Giorgio Veneziano MD, Joshua Uffman MD, Mike Fetzer BSISE, Brian Kenney MD, Joseph D. Tobias MD.

Department of Anesthesiology & Pain Medicine, Nationwide Children’s Hospital and The Ohio State University, Columbus, Ohio, USA

Background

- Following the development and implementation of a protocol to facilitate same day discharge after laparoscopic appendectomy protocol, it was determined that one of the primary reasons for failure to discharge on the same day of surgery was PONV.
- PONV contributed to 38.1% of cases that could not be discharged on the same day over a 6-month period.
- A Department of Surgery and Anesthesiology collaboration lead to the development of a perioperative QI protocol with the aim to decrease PONV and promote same day discharge of simple laparoscopic appendectomies.

Methods

- IRB approval waived - QI project.
- Orientation to protocol and feedback via meetings and emails.
- Protocol posted on walls of the general surgery operating rooms. (Figure 1)
- Electronic medical record was used to provide an alert to use the protocol and acknowledgement at case closure that it was considered a simple appendectomy (non-ruptured etc) and acceptable for same day discharge.
- Key drivers: staff awareness, electronic decision support, appropriate case selection, feedback of protocol compliance, and same day discharge results.

Results

- An increase in same day discharges was noted after implementation of the protocol. (Figure 2)
- 12-month time period: percentage of patients discharged home the same day with compliant (all items followed) vs non-compliant (3 or more items missed) protocol care was 72% versus 59%, respectively (p = 0.106).
- There was a significant decrease in PONV being the reason for inability to discharge same day cases, from 38.1% to 12.9% when comparing 6-month periods before institution of the protocol (n=42) and 6 months after implementation of the protocol (n=62)(p=0.004).
- Most common reasons for non-compliance (All or none compliance rate: 30%):
  1) Failure to administer dexmedetomidine
  2) Use desflurane as the volatile anesthetic agent.

Conclusions

- Implementation of a protocol to prevent PONV after simple laparoscopic appendectomies was associated with a trend of increased same day discharge.
- PONV as a reason for unsuccessful same day discharge was significantly decreased after implementation of the protocol.
- Low protocol compliance may have limited the impact on overall same day discharge.